

## **NWS Blacksburg Enhanced Short Term Forecast Emphasis**

The National Weather Service in Blacksburg, serving portions of southwestern Virginia, southeast West Virginia, and northwest North Carolina, issues public forecast information out through seven days in gridded, graphical, tabular and text formats. These forecasts are issued approximately every six hours throughout the day and night, but are updated in between these times as necessary to reflect current meteorological conditions and forecasts. As many of you may already be aware, the spatial resolution of our gridded forecast database is 2.5 km X 2.5 km (approximately 1.5 nm x 1.5 nm), with most forecast elements having a 1-hour temporal resolution.

Beginning **Oct 1, 2008**, the Blacksburg office officially began a phased implementation toward providing more emphasis and focus on the near term portion of our gridded forecast database (generally considered the first 12 to 24 hours of the forecast), with the goal of depicting as precisely and accurately as possible (given the above resolutions and the current state of the science) the expected weather conditions across our area at any given hour.

It is important to emphasize that this has not removed our attention and effort in any way from impending high impact weather events that may fall beyond this near term part of the forecast. However, it may mean that when benign weather is expected in the later parts of the forecast (especially in the Day 4 – 7 range) we will place a minimal effort on those extended ranges (which by nature are more challenging to accurately predict at the precision of our database). This will in turn allow for increased emphasis on the specific time window where a significant weather threat or change is expected to occur in the shorter term.

Initially, our efforts will focus on near-continuous updates to our gridded forecast database (at a minimum of every three hours) to ensure we are matching the current observations across the region (the “weather out your window”), which would include temperature, humidity, wind, sky cover or fog, and any precipitation. We will interpolate these latest observations into the next few hours of the forecast grids. With experience and the development of appropriate techniques and tools, we expect to steadily enhance our skill in the precise short term prediction of rapidly changing weather over the next several hours of the forecast (i.e., the depiction of a line of strong thunderstorms moving through the area, or changing precipitation type in a winter storm over the course of a few hours).

A majority of these continuous updates to our gridded forecast database will have no impact on the text forecast products we produce such as the Zone Forecast (ZFP) and Area Forecasts we place on the NOAA Weather “All-Hazards” Radio. However these minor updates *will* be noticeable in some of our tabular and graphical images on our web page that depict three-hourly resolution,

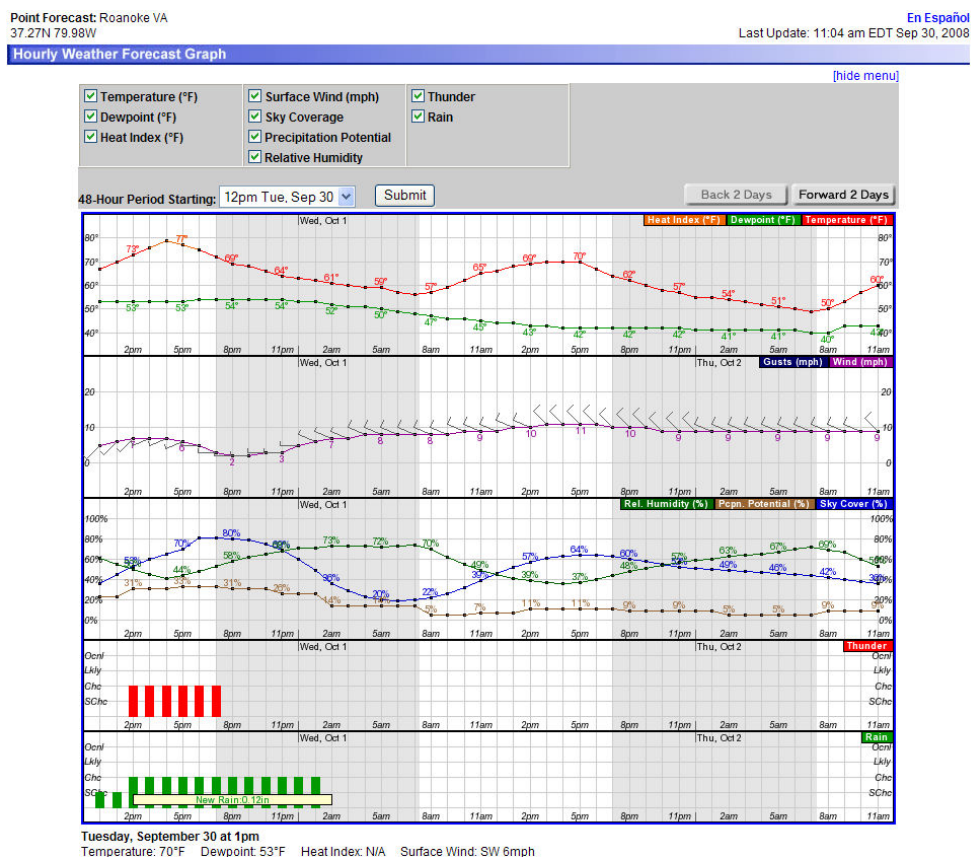
and especially on a graphical product that many users might not be familiar with, the *hourly* weather forecast graph (also known as a forecast meteogram).

Some examples of the kinds of graphical products where you can expect to see significant enhancement of weather forecasts from frequent forecast updates, as well as how to find them on our web site, can be found in the “Appendix” section of this article. Of course, if any update to weather grids is significant enough to impact a text-based product, we will issue an updated Area Forecast Discussion (AFD product) to provide customers with appropriate forecast reasoning. There will likely be more updates to text-based products because of our increased attention to constantly maintaining our weather database/grids, but there will also be many minor adjustments to the database that will not require a new forecast discussion or zone forecast update.

This first step toward an enhanced short term forecast emphasis will start us on a path toward providing improved services (e.g., increased temporal and spatial resolution and forecast accuracy) for the near term as well as for any high impact event occurring in the first several days of the forecast. We anticipate new products will eventually be developed to help communicate these improved services, such as automatically formatted Short Term Forecasts (NOWcasts), and other graphical depictions of current and near term important weather.

Finally, we are always interested in your feedback regarding our services, and with this initiative in particular. Please feel free to contact us via the E-mail address of our webmaster, at [rnk.webmaster@noaa.gov](mailto:rnk.webmaster@noaa.gov).

## Appendix

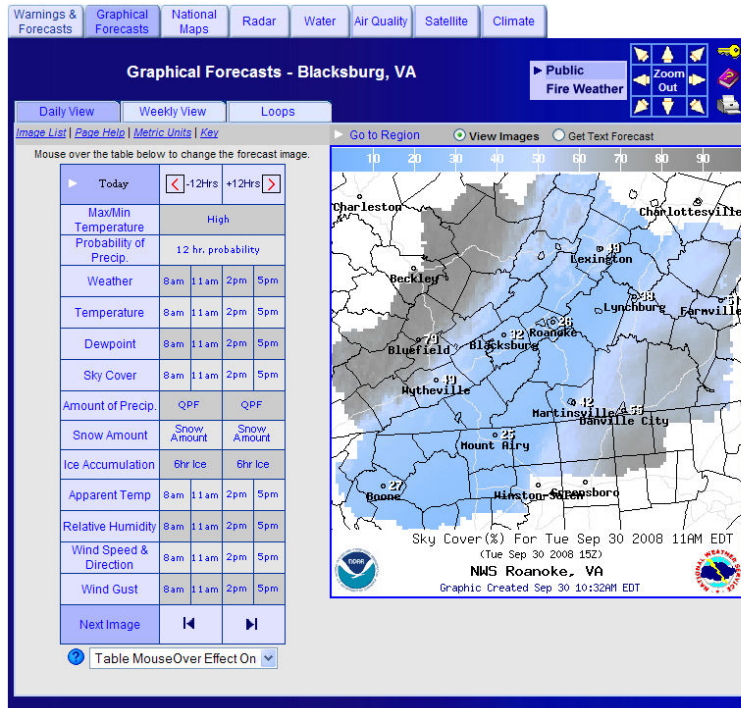


Example of the Hourly Weather Forecast Graph (meteogram), which can be obtained by using the point and click interface from our main page (click any location on the map), and if desired then more precisely refining your location in the smaller terrain map that shows up on the right side of the page, and finally by clicking on the Hourly Weather Graph link (highlighted in the below image) found in the lower right portion of the screen.

| Additional Forecasts & Information            |   |
|---|---|
| <a href="#">Forecast Discussion</a>           | <a href="#">Air Quality Forecasts</a>       |
| <a href="#">Printable Forecast</a>            | <a href="#">Text Only Forecast</a>          |
| <a href="#">Hourly Weather Graph</a>          | <a href="#">Tabular Forecast</a>            |
| <a href="#">International System of Units</a> | <a href="#">About Point Forecasts</a>       |
| <a href="#">Hazardous Weather</a>             | <a href="#">Regional Weather Conditions</a> |
| <a href="#">Local Climate</a>                 | <a href="#">Interactive Forecast Map</a>    |
| <a href="#">Home</a>                          |   |

We have also created a new page where you can access these graphs (use the “Hourly Weather Graphs” link on the left side of our front page). This new page includes a point and click map, as well as a long list of cities and towns across our area where these graphs have been pre-defined for.

## Appendix cont...



Above is an example of a graphical image of sky cover, available at 3-hour intervals, which can be accessed by clicking the image circled below on our front page.

